## ABSTRACT

The present invention relates to a method and a device for three-dimensionally determining the refractive index and, if necessary, the layer thickness of transparent or partially transparent layers in which the layer (1) is irradiated at different angles of incidence (5) with polarised light, and variations in the polarisation of the light are measured and evaluated as the light passes through the layer (1). The method is characterised in that the measurement is carried out through an immersion medium (3) between which the layer (1) is inserted.

A highly accurate determination of the refractive index of anisotropic thin layers in all three spatial directions is made possible by this method.

(Figure 2)

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